

## CLAIMS

1. An apparatus for the separation of solids and liquids comprising a perforated basket  
5 which is mounted rotatably within a fixed outer casing, a washing liquid supply means for providing washing liquid to the basket and its contents, and a device for establishing a control signal representative of the state of liquids centrifugally expelled from the basket when such liquids impinge on an inner surface of said fixed outer casing.
- 10 2. An apparatus according to claim 1, wherein said device comprises at least one transducer for monitoring the conductance of liquids in the outer casing.
3. An apparatus according to claim 2, wherein the device comprises a transducer in one of  
15 in and on the inner wall of the outer casing.
4. An apparatus according to claim 3, wherein said inner wall of the outer casing is cylindrical and said transducer is itself at least part cylindrical.
5. An apparatus according to claim 2, wherein the transducer comprises at least two  
20 electrodes set in an electrically insulating material.
6. An apparatus according to claim 2, wherein the device comprises a transducer in one of  
in and on the inner wall of the outer casing, and wherein the transducer comprises at least two electrodes set in an electrically insulating material.
- 25 7. An apparatus according to claim 2, wherein the device comprises a transducer in one of  
in and on the inner wall of the outer casing, the transducer comprising at least two electrodes set in an electrically insulating material, and wherein said inner wall of the outer casing is cylindrical and said transducer is itself at least part cylindrical.
- 30 8. An apparatus according to claim 2, wherein the transducer comprises electrodes coupled

to one of an AC bridge and other form of electronic controller.

9. An apparatus according to claim 8, wherein the transducer comprises electrodes which have no adjacent parallel sides whereby to increase the range for which the proportional relationship between the conductance measured via the transducer and the depth of the liquid flowing over the transducer is increased.
10. An apparatus according to claim 9, wherein the connections from the transducer to the AC bridge or the electronic controller are re-adjustable externally to allow the effective increase/decrease in the amount of electrically insulating material between the electrodes.
11. An apparatus for the separation of solids and liquids comprising a perforated basket which is mounted rotatably within a fixed outer casing, a washing liquid supply means for providing washing liquid to the basket and its contents, a transducer for establishing a control signal representative of the state of liquids centrifugally expelled from the basket when such liquids impinge on an inner surface of said fixed outer casing, and an auxiliary wash pipe for cleaning the surfaces of the transducer and to facilitate calibrations.
12. An apparatus for the separation of solids and liquids comprising a perforated basket which is mounted rotatably within a fixed outer casing, a washing liquid supply means for providing washing liquid to the basket and its contents, a device for establishing a control signal representative of the state of liquids centrifugally expelled from the basket when such liquids impinge on an inner surface of said fixed outer casing, and a temperature sensing device to measure the temperature of the liquid and send a signal to adjust the generated output accordingly.